

IN THE CLAIMS

1-95 (canceled)

96. (new) A data receiving method comprising:
receiving a field having a field sync segment
and a plurality of data segments, wherein the field
contains twelve symbols of map and count information
coded as a sixty-four symbol Kerdock code word;

decoding the sixty-four symbol Kerdock code
word using a 64/12 Kerdock decoder so as to recover the
twelve symbols of map and count information, wherein the
map information designates locations of data segments in
a current field, and wherein the count information is
partially indicative of a subsequent field in which the
map information changes; and,

locating the data segments in the current field
according to the map information.

97. (new) The data receiving method of claim
96 wherein the field sync segment contains the sixty-four
symbol Kerdock code word.

98. (new) The data receiving method of claim
96 wherein the symbols comprise two-level symbols.

99. (new) The data receiving method of claim 96 wherein the map information comprises ten symbols, and wherein the count information comprises two symbols.

100. (new) The data receiving method of claim 99 wherein a frame count comprises four symbols, wherein the two symbols of count information comprises a first half of the frame count, wherein a second half of the frame count is received in a later received field, and wherein the frame count is indicative of the subsequent field.

101. (new) The data receiving method of claim 96 wherein the received field comprises a first field, wherein a frame comprises the first field and a second field, wherein the map and count information comprises a current map and part of a frame count contained in the first field, wherein the second field contains a next map and the rest of the frame count, and wherein the frame count indicates a number of frames before the next map is used instead of the current map.

102. (new) The data receiving method of claim 101 wherein the current map and part of a frame count are received as a first sixty-four symbol Kerdock code word, wherein the next map and the rest of the frame count are received as a second sixty-four symbol Kerdock code word, and wherein the data receiving method further comprises inverting only one of the first and second sixty-four bit Kerdock code words.

103. (new) The data receiving method of claim 96 wherein the field comprises a first field, wherein the sixty-four symbol Kerdock code word comprises a first sixty-four symbol Kerdock code word, wherein the data receiving method further comprises receiving a second field containing a second sixty-four symbol Kerdock code word, and wherein the decoding of the sixty-four symbol Kerdock code word comprises inverting one but not both of the first and second sixty-four symbol Kerdock code words.

104. (new) The data receiving method of claim 96 wherein the decoding of the sixty-four symbol Kerdock code word comprises providing a reliability indication specifying the reliability with which the sixty-four

symbol Kerdock code word is decoded, and wherein the data receiving method further comprises:

storing the map information in a memory only if the reliability indication is sufficiently high and otherwise not changing the memory; and,

storing the count information in the memory only if the reliability indication is sufficiently high and otherwise changing previously stored count information in response to a timing signal related to the rate at which the field and subsequent fields are received.

105. (new) A data transmitting method comprising:

encoding twelve symbols of current map information and first count information as a first sixty-four symbol Kerdock code word using a 64/12 Kerdock encoder, wherein the current map information designates locations of data segments in a current field;

inserting the first sixty-four symbol Kerdock code word into a first field;

inserting data into the data segments of the first field;

transmitting the first field;

encoding twelve symbols of next map information and second count information as a second sixty-four symbol Kerdock code word using a 64/12 Kerdock encoder, wherein the next map information designates locations of data segments in a next field, and wherein the first and second count information indicate a number of frames after which the next map information becomes the current map information;

inserting the second sixty-four symbol Kerdock code word into a second field immediately following the first field;

inserting data into the data segments of the second field; and,

transmitting the second field.

106. (new) The data transmitting method of claim 105 wherein the inserting of the first sixty-four symbol Kerdock code word into the first field comprises inserting the first sixty-four symbol Kerdock code word into a field sync segment of the first field, and wherein the inserting of the second sixty-four symbol Kerdock code word into the second field comprises inserting the second sixty-four symbol Kerdock code word into a field sync segment of the second field.

107. (new) The data transmitting method of claim 105 wherein the symbols comprise two-level symbols.

108. (new) The data transmitting method of claim 105 wherein the twelve symbols of current map information and first count information consists of ten symbols of current map information and two symbols of first count information, and wherein the twelve symbols of next map information and second count information consists of ten symbols of next map information and two symbols of second count information.

109. (new) The data transmitting method of claim 108 wherein the first count information consists of two symbols, wherein the second count information consists of two symbols, wherein a frame count consists of the two symbols of the first count information and the two symbols of the second count information, and wherein the frame count indicates the number of frames after which the next map information becomes the current map information.

110. (new) The data transmitting method of claim 105 further comprising inverting only one of the first and second sixty-four bit Kerdock code words.

111. (new) A data receiving method comprising:

receiving a first field having a field sync segment and a plurality of data segments, wherein the first field contains a current map and two symbols of a four symbol frame count, and wherein the current map identifies locations of selected data segments in a current field;

receiving a second field having a field sync segment and a plurality of data segments, wherein the second field contains a next map and the other two symbols of the four symbol frame count, wherein the four symbol frame count indicates a next field to which the next map applies, and wherein the next map identifies locations of selected data segments in the next field;
and,

locating the data segments in the current field according to the current map.

112. (new) The data receiving method of claim 111 wherein the field sync segment of the first field contains the current map and the two symbols of the four symbol frame count, and wherein the field sync segment of the second field contains the next map and the other two symbols of the four symbol frame count.

113. (new) The data receiving method of claim 111 wherein the symbols comprise two-level symbols.

114. (new) The data receiving method of claim 111 wherein the current map comprises ten symbols, and wherein the next map comprises ten symbols.

115. (new) The data receiving method of claim 111 wherein the current map and the two symbols of a four symbol frame count are received as a first sixty-four symbol Kerdock code word, wherein the next map and the other two symbols of the four symbol frame count are received as a second sixty-four symbol Kerdock code word, and wherein the locating of the data segments includes decoding the first and second sixty-four symbol Kerdock code words using a 64/12 Kerdock decoder.

116. (new) The data receiving method of claim 115 wherein the decoding of the first and second sixty-four symbol Kerdock code words comprises providing first and second reliability indications specifying the reliability with which the corresponding first and second sixty-four symbol Kerdock code words are decoded, and wherein the data receiving method further comprises:

storing at least the next map in a memory only if at least one of the first and second reliability indications is sufficiently high; and,

storing the frame count in the memory only if the first and second reliability indications are sufficiently high and otherwise changing a previously stored frame count in response to a timing signal related to the rate at which the field and subsequent fields are received.

117. (new) The data receiving method of claim 115 wherein the decoding of the first and second sixty-four symbol Kerdock code words comprises inverting only one of the first and second sixty-four symbol Kerdock code words.

118. (new) A data transmitting method
comprising:

inserting a current map and two symbols of a
four symbol frame count into a first field of a frame,
wherein the first field has a field sync segment and a
plurality of data segments, and wherein the current map
identifies locations of selected data segments in a
current field;

inserting data into the data segments of the
first field;

transmitting the first field;

inserting a next map and the other two symbols
of the four symbol frame count into a second field of the
frame, wherein the second field has a field sync segment
and a plurality of data segments, wherein the next map
identifies locations of selected data segments in a next
field, and wherein the frame count is indicative of a
number of fields before the next field;

inserting data into the data segments of the
second field; and,

transmitting the second field.

119. (new) The data transmitting method of claim 118 wherein the field sync segment of the first field contains the current map and two symbols of the four symbol frame count, and wherein the field sync segment of the second field contains the next map and the other two symbols of the four symbol frame count.

120. (new) The data transmitting method of claim 118 wherein the symbols comprise two-level symbols.

121. (new) The data transmitting method of claim 118 wherein the current map comprises ten symbols, and wherein the next map comprises ten symbols.

122. (new) The data transmitting method of claim 118 wherein the current map and two symbols of the four symbol frame count are encoded as a first sixty-four symbol Kerdock code word by a 64/12 Kerdock encoder, wherein the inserting of a current map and two symbols of a four symbol frame count into a first field comprises inserting the first sixty-four symbol Kerdock code word into the field sync segment of the first field, wherein the next map and the other two symbols of the four symbol frame count are encoded as a second sixty-four symbol

Kerdock code word by the 64/12 Kerdock encoder, and wherein the inserting of a next map and the other two symbols of a four symbol frame count into a second field comprises inserting the second sixty-four symbol Kerdock code word into the field sync segment of the second field.

123. (new) The data transmitting method of claim 122 further comprising inverting one of the first and second sixty-four bit Kerdock code words.